ABSTRACT

It is intended to provide a detection and analysis system for cancer cell colonies, whereby an environmental cell carcinogen causing cell carcinogenesis or a chemical or a food inhibiting cell carcinogenesis can be quickly and accurately detected, and a method therefor. Namely, a detection and analysis system for cancer cell colonies using a culture system (1) prepared by the agar overlaying method which comprises a bottom layer (1) being composed of a culture medium, soft agar and a carcinogenesis inducer and/or an anticancer agent and having a definite size and a top layer (12) being composed of a culture medium, soft agar and cells, and further provided with an optical microscope (21), an electronic data conversion unit (22) such as a digital camera and a computer system (23) for processing the data converted by the electronic data conversion unit (22). This computer system (23) has an image analysis software stored therein whereby the electronic data are grayed, calibrated and binarized by subtraction and single threshold and thus the presence or absence of colonies, the number of colonies, the size distribution of colonies, etc. are analyzed.